

WHAT IS CLAIMED IS:

1. An occupant discriminating method for
a vehicular seat, which comprises a seat cushion frame,
a load receiving member on the seat cushion frame on
5 which the load of an occupant acts, springs which are
interposed between the load receiving member and the
frame and extend in accordance with the load, and
displacement sensors which output electrical signals
corresponding to the respective elongations of the
10 springs, the occupant discriminating method comprising:

first-stage determination step which determines
the type of an occupant in the seat in accordance with
the electrical signals; and

second-stage determination step which determines
15 whether or not the result of determination by the
first-stage determination step is maintained for
a given period of time and settles the type of the
occupant if the result of determination by the first-
stage determination step is maintained for the given
20 period of time.

2. An occupant discriminating method according
to claim 1, which further comprises third-stage
determination step which compares the result of
determination by the second-stage determination step
25 with the preceding result of determination and settles
the result of determination by the second-stage
determination step in accordance with the result of

the comparison.

3. An occupant discriminating method according to claim 1, wherein the type of the occupant to be determined is any of types including an adult,
5 a smallish adult, and a child.

4. An occupant discriminating method according to claim 3, which comprises:

a step of obtaining the difference between loads on the front and rear parts of the load receiving
10 member in a seat cushion and comparing the load difference with a first threshold value and a second threshold value;

a step of concluding the occupant to be a smallish adult if the load difference is not smaller than the
15 first threshold value;

a step of concluding the occupant to be a child if the load difference is not greater than the second threshold value;

a step of identifying a gray zone in which the occupant cannot be determined if the load difference is
20 smaller than the first threshold value and greater than the second threshold value;

steps of determining whether or not the preceding result of determination is a smallish adult if the gray
25 zone is identified and concluding that the occupant is a smallish adult if the preceding result of determination is a smallish adult; and

steps of concluding that the occupant is a child if the preceding result of determination is a child after the gray zone is identified.

5 5. An occupant discriminating method according to claim 4, which further comprises:

 a step of determining whether or not the occupant is a smallish adult by comparing the total sum of the respective maximum values of mean displacement voltage values detected by means of the sensors with a third
10 threshold value if the preceding result of determination is neither a smallish adult nor a child after the gray zone is identified;

 a step of determining whether or not the occupant is a smallish adult by comparing the total sum of the
15 respective minimum values of the mean displacement voltage values with a fourth threshold value; and

 a step of determining whether the occupant is a smallish adult or a child by comparing a value related to standard displacements of the mean displacement voltage values with a fifth threshold value.
20